PB-243 640

VEHICLE PROCUREMENT FOR TESTING BY FTP AND SELECTED SHORT CYCLES AT EPA

F. Peter Hutchins

Olson Laboratories, Incorporated

Prepared for:

Environmental Protection Agency

May 1975

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Waste Management
Office of Mobile Source Air Pollution Control
Emission Control Technology Division
Ann Arbor, Michigan 48105

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Report describes procedure used for the procurement of privately owned vehicles for testing by EPA.

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by

Olson Laboratories, Inc.
421 East Cerritos Avenue
Anaheim, California 92805

Contract No. 68-03-0452

EPA Project Officer: F. Peter Hutchins

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Publication No. EPA-460/3-75-006

INTRODUCTION

Task 03 of contract number 68-03-0452 required Olson Laboratories to procure 150 privately owned 1974 model year vehicles for delivery to EPA's Motor Vehicle Emissions Laboratory in Ann Arbor, Michigan. These vehicles (Chevrolets with 400 CID engines, Plymouths with 318 CID engines, and Ford Pintos with 140 CID engines) were to be selected from the registration records for Wayne County, Michigan, and delivered in random order to EPA for testing under the 207(b) Correlation Program.

Upon completion of a series of short cycle tests and the 1975 Federal Test Procedure, Olson Laboratories was responsible for the return of the vehicles to their owners. Numerous precautions were taken to insure that the vehicles would be returned in their as-received condition.

PROGRAM OUTLINE

Vehicle Selection

The 150 vehicles to be tested were divided into 3 classes of 50 vehicles each. The classes were as follows:

- Class I, Group I (410 Class- 1974 Ford Pinto 2-door or 3-door Runnabout, equipped with: 2.3 litre

(140 CID) engine; AIR system;automatic transmission; standard rear axle ratio; original-equipment size tires; no power steering; and no power brakes. The inertia weight was 2750 lbs for this vehicle class.

- Class III, Group I (402 Class) - 1974 Plymouth Satellite and Dodge Coronet or Charger 2-door or 4-door sedan, equipped with: 318 CID 2V engine; automatic transmission; standard rear axle ratio; original-equipment size tires; power steering; and power brakes. The inertia weight was 4000 lbs for this vehicle class.

- Class IV, Group II (341 Class) - 1974 Chevrolet Impala or Caprice 2-door or 4-door sedan, equipped with: 400 CID 2V engine; automatic transmission; standard rear axle ratio; original equipment size tires; air conditioning; power steering; and power brakes. The inertia weight was 5500 lbs for this class.

Vehicles meeting the specifications for each class outlined above were also required to have been maintained according to manufacturers' recommendations. Owners were required to sign a notarized affadavit stating that their vehicle had indeed been properly maintained before considering their vehicle for use in the test program.

This test program further required each vehicle to have accumulated less than 12,000 miles. However EPA later changed the mileage accumulation limit to 18,000 and finally 20,000 miles. The reason for these changes was that since the program began more than one year after the introduction of 1974 model year vehicle, the majority of 1974 vehicles registered in Wayne County had already accumulated 12,000 or more miles (not an unusual amount for one year's use). In order to meet the requirements of 150 vehicles delivered, the greater mileage accumulations were allowed.

Vehicle Procurement

A random list of vehicles potentially meeting the requirements of the program was drawn from the registration records and the owners were sent certified letters explaining the test program and incentives for allowing Olson Laboratories and EPA the use of their automobiles. The letters were mailed in groups at time intervals that allowed continuity in the procurement procedure. Owners were then contacted by telephone, usually one week to ten days after the mailings. When an owner agreed to participate in the program, he was required to complete a questionnaire providing necessary data on vehicle usage, maintenance, accumulated mileage, and physical condition (see appendix). Loan and test agreements also had to be completed before the vehicle was deemed eligible for testing.

In order to obtain owner's permission to use their automobiles, the following incentives were offered:

- A $50.00 U.S. Savings Bond
- A new set of spark plugs
- A full tank of gas
- An inspection report on the overall condition of the vehicle
- A 1974 or 1975 model year loaner car for use while the participant's vehicle was being tested
- A certificate of appreciation

Vehicle Delivery/Pickup

Upon acquisition of the participants vehicle, an Olson representative inspected it and recorded its condition on a Preliminary Inspection Report form (see appendix).

An EPA representative then checked the vehicles as they arrived at the EPA laboratory and noted any inconsistencies on the Preliminary Inspection Report.

Upon completion of testing, an Olson representative again checked the vehicles condition when it was picked up at EPA. The vehicle was finally returned to its owner with new spark plugs, a full tank of gas, and a report on its mechanical condition, as per the agreement signed before acquisition by Olson.

Test Procedure

The test procedure followed by EPA in this program consisted of:

(a) A full 1975 Federal Test, minus evaporative emissions procedure

(b) Clayton Key Mode (High speed, low speed, idle)

(c) Federal three mode (High speed, low speed, idle)

(d) High speed unloaded test (2500 RPM)

(e) Federal Short Cycle

(f) NJ/NY Composite Cycle

Conclusion

Of the program requirement of 150 vehicles, Olson Laboratories delivered 149 vehicles to EPA and returned the vehicles to their owners. No major difficulties were encountered, and the contract task was closed on April 1, 1975.

APPENDIX

VEHICLE INSPECTION AND PROCUREMENT FORMS

Preceding page blank

OLSON LABORATORIES, INC.

CAR NO. _____

STANDARD VEHICLE LOAN AGREEMENT

In consideration of the Participant undersigned (herein called the Participant) who has agreed to participate in an important new program for cleaner air, Olson Laboratories, Inc., (herein called Olson) hereby loans to Participant the loan vehicle described below, subject to terms and conditions of this agreement.

1. Participant agrees to be extremely careful in the use of loan vehicle and agrees to return loan vehicle within a period of time not to exceed five days, together with all tires, tools, and accessories, to Olson in as good exterior, interior, and operating condition, except for normal wear and tear, as when vehicle was received by Participant.

2. Participant agrees that loan vehicle will not be operated to carry passengers or property for a consideration express or implied; or to push or tow any vehicle or trailer. Loan vehicle will be operated only by Participant or any member of Participant's immediate family, provided that Participant's permission first be given and that all such operators shall be at least 21 years of age and duly qualified and licensed.

3. Participant expressly acknowledges personal liability for: (a) all charges, fines, and costs for parking, traffic, or other legal violations assessed against loan vehicle, Participant or Olson except where caused through fault of Olson; (b) Olson's costs including reasonable attorney's fees where permitted by law, incurred collecting payments due from Participant hereunder; (c) Olson's costs to repair collision or upset damages to loan vehicle provided. However, if loan vehicle is operated in accordance with all terms hereof, Participant's liability for such damage will not exceed $100.

4. Participant will not be liable for non-collision losses to loan vehicle caused by perils normally protected against by a comprehensive physical damage insurance policy.

5. Participant and any authorized operator as prescribed in paragraph 2 agrees to participate as an insured in benefits of an automobile liability insurance policy, a copy of which is available from Olson. Said policy is primary in respect to other insurance carried by Participant or authorized operator and contains bodily injury or death liability limits of $250,000 for each person in each accident and subject to the foregoing limitation, $500,000 limits for all persons in each accident, and property damage liability limits of $50,000 for each accident. Participant is bound by and agrees to the terms, conditions, limitations, and restrictions of the policy, it being understood that the policy is a standard motor vehicle policy in the state of garaging the loan vehicle.

6. Participant agrees to release Olson from any liability for loss of or damage to any property left, stored, or transported by Participant or any other person in or upon vehicle after receipt, during term of this loan or after return of loan vehicle to Olson. Participant further agrees to indemnify and hold harmless Olson against all claims arising out of such loss or damage.

7. Agreed to this ___ day of _____, 19___ by

_____ and _____

R. L. Gibney, President — Participant

Loan Car		Agreement Renewal		Loan Car Condition				
				Out		In		
ID No.	License No.	Initial	Date	OK	Initial	OK	Initial	Date

Drivers License No. _____ Expiration Date _____

OLSON LABORATORIES, INC.

CAR NO. _____

TEST AGREEMENT

Your vehicle is being loaned to Olson Laboratories, Inc., for use in an important new program for cleaner air. This agreement, signed by the president of Olson Laboratories, Inc. is your assurance of full protection against any loss sustained by accident or damage to the vehicle while in the possession of Olson Laboratories, Inc., or its representatives.

1. I agree to loan my vehicle described as a _____ registered in the State of _____, license plate number _____ to Olson Laboratories, Inc., for a period of time not to exceed five days or any one test. I understand that I may refuse to loan the vehicle to Olson Laboratories, Inc., at any time and that I am under no obligation whatever to Olson Laboratories, Inc.

2. Olson Laboratories, Inc., agrees to be fully responsible for any and all damage to the vehicle occurring while the vehicle is in the possession of Olson Laboratories, Inc., for its representatives. Possession is hereby defined as care, control, custody, operation, inspection or storage between the time the vehicle is received from the owner by Olson Laboratories, Inc., or its representatives and the time the vehicle is returned to the owner by Olson Laboratories, Inc., or its representatives.

3. Olson Laboratories, Inc., agrees to indemnify and hold harmless the vehicle owner of any repairs, damage, loss or liability sustained by the vehicle owner by reason of accident or damage to the vehicle while in the possession of Olson Laboratories, Inc., or its representatives.

4. Olson Laboratories, Inc., agrees to provide primary automobile liability insurance on the vehicle while in the possession of Olson Laboratories, Inc., or its representatives.

5. Olson Laboratories, Inc., agrees to be extremely careful in the use of the vehicle, and agrees to return the vehicle to the vehicle owner in as good exterior, interior and operating condition, except for normal wear and tear, as when the vehicle was received by Olson Laboratories, Inc., or its representatives.

6. Agreed to this _____ day of _____, 19_____ by

R J Gibney — _____ and _____

R. L. Gibney, President
Olson Laboratories, Inc.

Vehicle Owner

Agreement Renewal	Initial	Date
1.		
2.		
3.		
4.		
5.		

OLSON LABORATORIES, INC.
A Subsidiary of Northrop Corporation

PRELIMINARY INSPECTION REPORT

CODE No. _____ – _____

VEHICLE MAKE/MODEL _____ YEAR _____

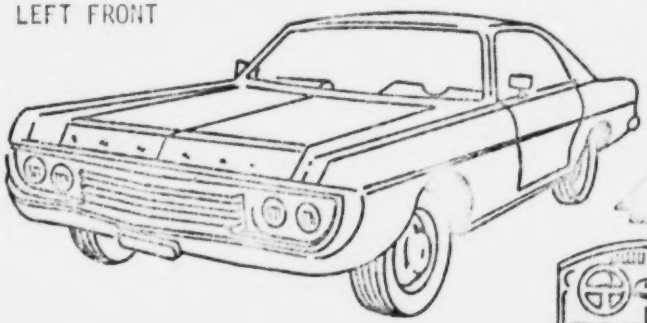
MILEAGE _____ VIN _____ LICENSE NO. _____

VEHICLE OWNER _____ carb bbls. _____

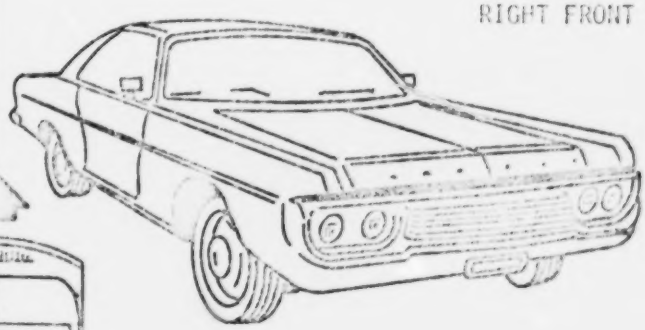
ADDRESS _____

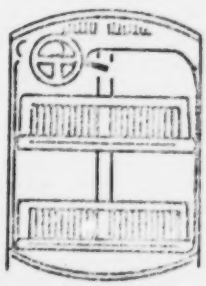
PLEASE BE SPECIFIC AND INDICATE ALL VISUAL DAMAGE-CIRCLE LOCATION

LEFT FRONT

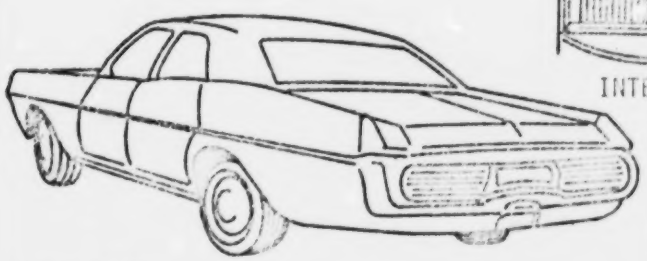


RIGHT FRONT

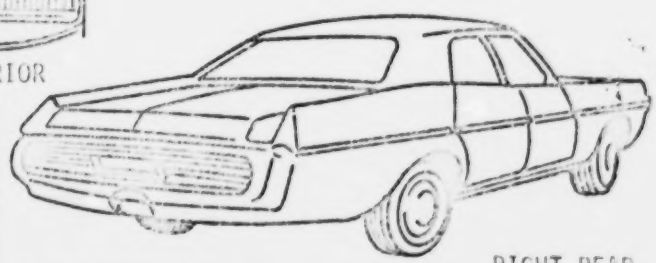




INTERIOR



LEFT REAR



RIGHT REAR

S=SATISFACTORY U=UNSATISFACTORY

	S	U		S	U		S	U
Headlights (dims/brights)			Wiper _____			Steering _____		
Tail Lights _____			Washers _____			Air Conditioning ___		
Brake Lights _____			Mirrors _____			Heater Blower _____		
Lic. Plate Lights _____			Tires _____			Starter _____		
Back-up Lights _____			Brakes _____			Air Pump Belt _____		
Horn _____			Noises _____			Gas Tank _____		

Comments: _____

Olson Representative	Test Participant	EPA Representative
Signature Date	Signature Date	Signature Date

VEHICLE DATA SHEET

Test Site ☐ Contractor ☐ Vehicle Class Number ☐☐☐

Vehicle Serial Number Within Class ☐☐ ☐☐☐ (Contractor use only) Card Number ☐☐

Date Received ☐☐☐☐☐☐

Make ☐☐☐☐☐☐ Model ☐☐☐☐☐

VIN ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Carburetor Type ☐☐ Engine CID ☐☐☐

Odometer Reading ☐☐☐☐☐ Body Style ☐☐☐☐☐

Transmission Type ☐☐ Axle Ratio ☐☐☐

Tire Size ☐☐☐☐☐☐ Air Conditioning ☐

License Number ☐☐☐☐☐☐

Sequence Number ☐ Date Purchased ☐☐☐☐☐☐

Signature below signifies vehicle has been accepted for Emission Testing.

_____
Site Supervisor Signature

_____
Date

_____
Technician Signature

FORM 1-74A Dist: 1st - ACM
2nd - EPA
3rd - Contractor

Form Approved
O.M.B. No 158-S 73009
Approval Expires March 1,1975

QUESTIONNAIRE

THE VEHICLE SELECTED FOR POSSIBLE TESTING IS DESCRIBED BELOW. IF YOU PRESENTLY OWN THE VEHICLE DESCRIBED, PLEASE ANSWER QUESTIONS 1-10 IN REGARD TO THAT VEHICLE. IF YOU DO NOT PRESENTLY OWN THE VEHICLE, PLEASE CHECK HERE ☐ AND RETURN THE QUESTIONNAIRE UNANSWERED.

MAKE: _____ MODEL: _____

IDENTIFICATION NUMBER: _____

1. ARE YOU THE ORIGINAL OWNER OF THE VEHICLE?

☐ YES ☐ NO

2. ON WHAT DATE DID YOU PURCHASE THE VEHICLE? _____
DAY MONTH YEAR

3. WHAT IS THE CURRENT MILEAGE OF THE VEHICLE?_____

4. WHAT TYPE OF CARBURETOR DOES THE VEHICLE HAVE? (PLEASE CHECK ONE ANSWER).

☐ 1 BARREL ☐ 2 BARREL ☐ 4 BARREL

☐ FUEL INJECTION ☐ DON'T KNOW

5. WHAT TYPE TRANSMISSION DOES THE VEHICLE HAVE?

☐ AUTOMATIC ☐ MANUAL

6. (A) HAVE YOU MAINTAINED THE VEHICLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS?

☐ YES ☐ NO

IF THE ANSWER TO 6A IS "YES" PLEASE ANSWER 6B.

(B) DO YOU HAVE RECEIPTS SHOWING THAT THE VEHICLE WAS MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS?

☐ YES ☐ NO

Preceding page blank

IF YOUR ANSWER TO 6B IS "NO" PLEASE ANSWER 6C.

(C) WOULD YOU BE WILLING TO SIGN AN AFFIDAVIT THAT YOU HAVE MAINTAINED THE VEHICLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS?

☐ YES ☐ NO

7. HAS THE VEHICLE BEEN INVOLVED IN AN ACCIDENT WHICH DAMAGED THE ENGINE, FRAME, OR GAS TANK?

☐ YES ☐ NO

8. HAS THE VEHICLE OR ENGINE BEEN ALTERED BY THE INSTALLATION OF: EXHAUST HEADERS, PERFORMANCE CARBURETOR COMPONENTS, A PERFORMANCE CAMSHAFT, PERFORMANCE IGNITION EQUIPMENT, OR MODIFIED EXHAUST SYSTEM COMPONENTS?

☐ YES ☐ NO

9. HAS THE VEHICLE BEEN OPERATED:

(A) 50 PERCENT OF THE TIME ON UNPAVED ROADS?

☐ YES ☐ NO

(B) IN COMPETITIVE EVENTS?

☐ YES ☐ NO

(C) HAULING OR TRANSPORTING HEAVY LOADS FOR WHICH IT WAS NOT DESIGNED?

☐ YES ☐ NO

10. IF YOUR VEHICLE IS SELECTED FOR TESTING WOULD YOU ALLOW:

(A) A QUALIFIED MECHANIC TO INSPECT THE EMISSION SYSTEM COMPONENTS ON YOUR VEHICLE?

☐ YES ☐ NO

(B) EXHAUST EMISSION TESTS TO BE PERFORMED ON YOUR VEHICLE?

☐ YES ☐ NO

PLEASE SIGN HERE _____ DATE _____

THANK YOU FOR YOUR COOPERATION!!!

OLSON LABORATORIES, INC.

Code No. _____

AFFIDAVIT

STATE OF _____, COUNTY OF _____

_____, BEING FIRST DULY AFFIRMED, DEPOSES AND SAYS:

1. I AM THE OWNER (OR JOINT OWNER) OF THE VEHICLE DESCRIBED BELOW AND HAVE PERSONAL KNOWLEDGE OF THE MATTERS HEREINAFTER REFERRED TO.

   MAKE: _____ MODEL: _____

   IDENTIFICATION NUMBER: _____

2. I PURCHASED THE 1974 VEHICLE DESCRIBED ABOVE AS A NEW VEHICLE AND HAVE BEEN THE OWNER (OR JOINT OWNER) OF THE VEHICLE SINCE THE DATE OF PURCHASE.

3. DURING THE PERIOD OF MY OWNERSHIP (OR JOINT OWNERSHIP) OF THE VEHICLE, ALL MAINTENANCE WAS PERFORMED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

_____
SIGNATURE DATE

SUBSCRIBED AND AFFIRMED BEFORE ME, A NOTARY PUBLIC, AND I HEREBY CERTIFY THAT I AM DULY AUTHORIZED BY THE LAWS OF THE STATE OF _____, COUNTY OF _____, TO ADMINISTER OATHS.

(SEAL) _____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____, 19___.

EC 04 - 2/74